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ABSTRACT

This is one of a series of units for environmental education developed by the Highline Public Schools. The unit may be used as an introduction to the study of anthropology, the influence of ecology on the study of anthropology, and an introduction to the physical school environment. For best results, it should be used at the beginning of the school year. Lesson No. 1 can be completed by any teacher at any schools. Lessons No. 2 and 3 will have to be modified to fit your particular school surroundings, but all notes, preparations, and test patterns can be followed as they are included here by substituting your school map and particular school information. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools. (RH)

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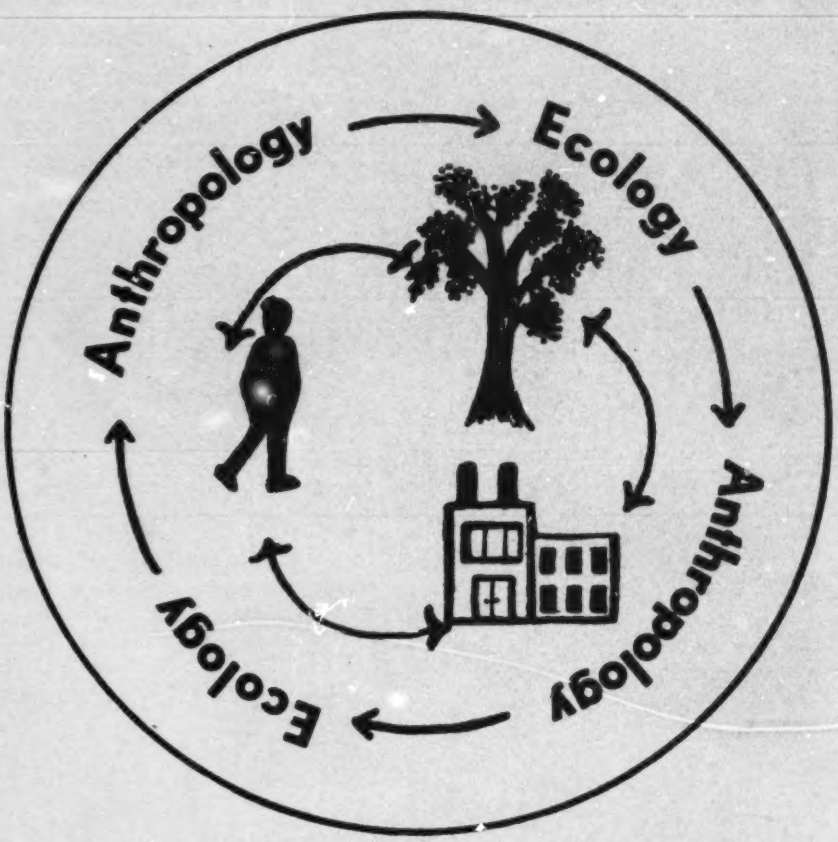

by Margaret Skidmore

An Environmental Learning Experience for 7th grade level. One of many "ELE PAKS" available for all areas.

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SE 021 478

NATURE KNOWS BEST

PROJECT ECOLOGY TITLE III

The Kids Who Participated in the Pilot Evaluation Program

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Becky Anderson	Ted Henderson	Don Ridley
Sherri Anderson	Steve Jorish	Dee Robinson
Scott Boere	Richard Jordon	Tony Schmid
Tim Breneman	Delci Mathews	Jerry Snell
Jim Brooks	Tommy Metteer	Monica Tackett
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The Readers Who Studied, Critiqued & Offered Suggestions & Ideas for Improvement

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Evaluation Results REgarding This ELE May Be Obtained by Including This Page and a Self Addressed Stamped Envelope To

Highline Public Schools, District 401
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EVERYTHING IS CONNECTED TO EVERYTHING ELSE

PROJECT ECOLOGY

THERE IS NO SUCH THING AS A FREE LUNCH

PROJECT ECOLOGY TITLE III

EVERYTHING MUST GO SOME WHERE

PROJECT ECOLOGY TITLE III

NOTES TO THE TEACHER

This unit may be used as an introduction to the study of anthropology, the influence of ecology on the study of anthropology, and an introduction to the physical school environment for the seventh grade student. For best results, it should be used at the beginning of the school year.

Lesson No. 1 can be completed by any teacher at any school. Lessons No. 2 and 3 will have to be modified to fit your particular school surroundings but all notes, preparations and test patterns can be followed as they are included here, by substituting your school map and particular school information.

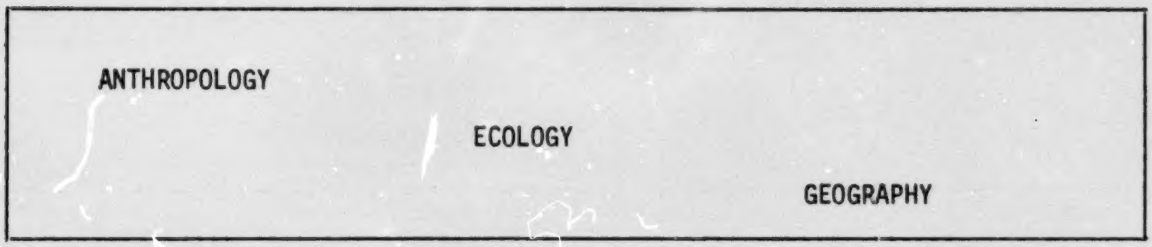
By its very nature, this unit helps the seventh grader to become acclimated to his new school and also increases environmental awareness in his school surroundings, plus points a way where he can channel his efforts towards improving his school environment.

MASTER MATERIALS LIST

1. Blank school maps - enough for two per student
2. Overhead transparency of school map
3. Thirty copies of teacher schedule, or enough for one per pupil in your classroom
4. Colored paper 24" x 12" - one for each student
5. Overhead projector
6. Flair pens or crayons
7. Student handouts of ecology work papers
8. Colored name tags and pins
9. Magazines for cutting up (Home Beautiful, Better Homes & Gardens, Sunset, Life, U. S. News & World Report are some I have used)
10. Scissors, rulers, yardsticks
11. Colored chalk
12. Dictionaries
13. 3 x 5 cards
14. Copy of "The Turtle" by John Steinbeck

PRELIMINARY PROCEDURE

Preparation of bulletin board: Have one bulletin board covered with white butcher paper and the words in bold black letters on it as follows:



(If another arrangement of words appeals to you, feel free!)

LESSON 1

CONCEPT: The study of man is the study of man's environmental interactions.

MATERIALS:
Overhead projector, colored felt pens
or
Blackboard and colored chalk
Scissors, magazines, paste or staplers
Colored paper
3 x 5 cards
Copy of Steinbeck's, "The Turtle"

PROCEDURE: Put on the board/overhead, the words:

Anthro - pology
Ec - ology (Logos --- ?)

1. Ask students the following questions; calling on specific students for answers and listing those answers on the overhead/board, using different colors for each word.

Logos - 1.	Anthro - 1.	Ec - 1.
2.	2.	2.
3.	3.	3.

Students will try to give you a definition for the whole word. You must be careful to channel the questions toward the word part.

Ask: *What does the suffix LOGOS mean?*
What does the prefix ANTHRO mean?
What does the prefix EC mean?

2. Pass out dictionaries to the class and have each student look up the definition of the words. Call on a student to read each definition aloud. Then discuss the closest possible combinations to the dictionary definition as listed on the board, plus the reasons why some or all the board/overhead definitions don't fit.

3. Write the word INTERRELATIONSHIP on the overhead/board. Have students look up its meaning and read it aloud. Ask them for an example of interrelationships - bread and butter.

Refer back to LOGOS. Ask: *How are the words ANTHROPOLOGY and ECOLOGY related? How does ECOLOGY affect ANTHROPOLOGY? Vice versa? Can we study anthropology without studying ecology? How? How not?*

4. Ask students: *What other words can you think of that would fit into these two studies, but are special areas of these studies?* Let the students use their dictionaries, discussing their suggestions and taking a consensus before listing possibilities on the board. They will come up with:

Archaeology	Biology
Geology	Psychology

Discuss the relationship of the listed words with ECOLOGY AND ANTHROPOLOGY. Mention Geography and have students look it up in the dictionary. Have a student read the definition aloud and have two students put the definition into their own words, writing the best definition on the overhead/board. Ask: *How does GEOGRAPHY relate to ANTHROPOLOGY? What affect does Geography have on the study of man? On the study of ecology?*

Point out the physical nature of Geography and its influence on man's development, habits, and way of life.

5. Write on the overhead/board:

Environment Habitat Eco-System

Have the students look up the definitions, read them aloud and write a shortened version of each next to the word.

Tell the class that these words describe how man adapts to geography through ecology and anthropology.

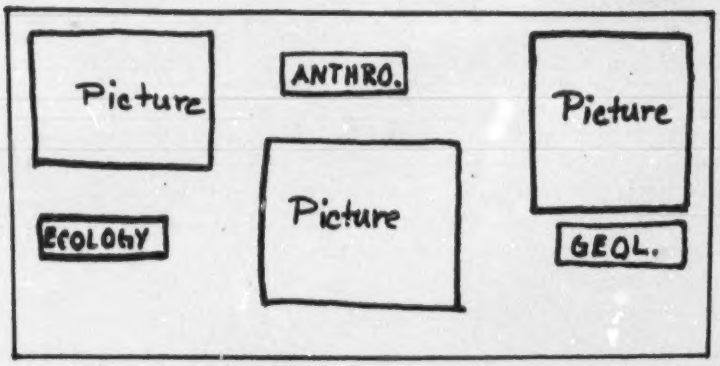
6. Read aloud the story, "The Turtle" (copy enclosed) by John Steinbeck.

At the conclusion, ask the following discussion questions: *How did the turtle change the eco-system on the first side of the road? On the other side? What would have happened if the turtle had been killed by the car? What will the future be like on the other side of the road after the turtle passes? How does the story apply to Man? What did the turtle do? What was harmful to the environment? What useful? How did the turtle change the environment before he crossed the road? After? Were his actions conscious? Did he know what he was doing? What would have happened if the turtle had been killed by the truck driver? Was he conscious? Did he know what he was doing? In what way yes - what way no? How important might those changes be in 20 years? In 50 years?*

EVALUATIVE ACTIVITY:

Discuss and have class come to consensus of working definition of ANTHROPOLOGY, GEOGRAPHY, ECOLOGY. Ask how ecology fits into all areas of study. *Which areas would it fit most? Which least, why? Do these three words deal only with nature? Why? Why not?*

Pass out to each student, a magazine and a pair of scissors. Have available in a central location, extra magazines, paste or staplers, stack of various colored construction paper, and 3 x 5 cards. Tell class: *Your task now is to show that you understand what the words ANTHROPOLOGY, ECOLOGY, GEOGRAPHY mean and how they interrelate. You are to choose three pictures from your magazine, each picture the best you can find to represent each word. Cut them out and paste them on a piece of construction paper. Then, on a 3 x 5 card (one for each word) write a 2-3 sentence explanation of why you chose that picture to represent that word. Paste or staple the explanation near or under your picture. Put your name in the bottom right-hand corner and turn them in to me.* (Stress neatness)



Example only - Students may design any arrangement they wish.

ADDITIONAL ACTIVITIES:

1. (After grading picture definitions without telling class what grades have been given)
   Divide class into groups of five. Mix up the picture definitions and redistribute to groups. Have students evaluate pictures, choosing the best definition for each of the words. Cut these from the larger pictures and place on the bulletin board all ready placed in the room.

2. Have students bring into class magazine and newspaper articles which show the interrelationship of geography, anthropology, and ecology, with a written explanation of why they chose the article.

THE TURTLE
by John Steinbeck

Man is not the only creature who moves the earth; it does not belong to him alone. Imagine the effect he has upon it, if even the slowest creature accomplishes so much on a trip across a highway.

The concrete highway was edged with a mat of tangled, broken, dry grass, and the grass heads were heavy with oat beards to catch on a dog's coat, and foxtails to tangle in a horse's fetlocks and clover burrs to fasten in sheep's wool; sleeping life waiting to be spread and dispersed, every seed armed with an appliance of dispersal, twisting darts and parachutes for the wind, little spears and balls of tiny thorns, and all waiting for animals and for the wind, for a man's trouser cuff or the hem of a woman's skirt, all passive but armed with appliances of activity, still, but each possessed of the ability of movement.

The sun lay on the grass and warmed it, and in the shade under the grass the insects moved, ants and ant lions to set traps for them, grasshoppers to jump into the air and flick their yellow wings for a second, sow bugs like little armadillos, plodding restlessly on many tender feet. And over the grass at the roadside a land turtle crawled, turning aside for nothing, dragging his high-domed shell over the grass. His hard legs and yellow-nailed feet threshed slowly through the grass, not really walking, but boosting and dragging his shell along. The barley beards slid off his shell, and the clover burrs fell on him and rolled to the ground. His horny beak was partly open, and his fierce, humorous eyes, under brows like fingernails, stared straight ahead. He came over the grass leaving a beaten trail behind him, and the hill, which was the highway embankment, reared up ahead of him. For a moment he stopped, his head held high. He blinked and looked up and down. At last he started to climb the embankment. Front clawed feet reached forward but did not touch. The hind feet kicked his shell along, and it scraped on the grass, and on the gravel. As the embankment grew steeper and steeper, the more frantic were the efforts of the land turtle. Pushing hind legs strained and slipped, boosting the shell along, and the horny head protruded as far as the neck could stretch. Little by little the shell slid up the embankment until at last a parapet cut straight across its line of march, the shoulder of the road, a concrete wall four inches high. As though they worked independently the hind legs pushed the shell against the wall. The head upraised and peered over the wall to the broad smooth plain of cement. Now the hands, braced on top of the wall, strained and lifted, and the shell came slowly up and rested its front end on the wall. For a moment the turtle rested. A red ant ran into the shell, into the soft skin inside the shell, and suddenly head and legs snapped in, and the armored tail clamped in sideways. The red ant was crushed between body and legs. And one head of wild oats was clamped into the shell by a front leg. For a long moment the turtle lay still, and then the neck crept out and the old humorous frowning eyes looked about and the legs and tail came out. The back legs went to work, straining like elephant legs, and the shell tipped to an angle so that the front legs could not reach the level cement plain. But higher and higher the hind legs boosted it, until at last the center of balance was reached, the front tipped down, the front legs scratched at the pavement, and it was up. But the head of wild oats was held by its stem around the front legs.

Now the going was easy, and all the legs worked, and the shell boosted along, waggling from side to side. A sedan driven by a forty-year-old woman approached. She saw the turtle and swung to the right, off the highway, the wheels screamed and a cloud of dust boiled up. Two wheels lifted for a moment and then settled. The car skidded back onto the road, and went on, but more slowly. The turtle had jerked into its shell, but now it hurried on, for the highway was burning hot.

And now a light truck approached, and as it came near, the driver saw the turtle and swerved to hit it. His front wheel struck the edge of the shell, flipped the turtle like a tiddlywink, spun it like a coin and rolled it off the highway. The truck went back to its course along the right side. Lying on its back, the turtle was tight in its shell for a long time. But at last its legs waved in the air, reaching for something to pull it over. Its front foot caught a piece of quartz and little by little the shell pulled over and flopped upright. The wild oat head fell out and three of the spearhead seeds stuck in the ground. And as the turtle crawled on down the embankment, its shell dragged dirt over the seeds. The turtle entered a dust road and jerked itself along, drawing a wavy shallow trench in the dust with its shell. The old humorous eyes looked ahead, and the horny beak opened a little. His yellow toenails slipped a fraction in the dust.

SOURCE: Eco-Fiction
Edited by John Stadler
Washington Square Press
1971

LESSON 2

CONCEPT: Limiting factors are living and non-living.

MATERIALS
Blackboard or overhead projector
Copies of school map
Crayons or colored felt pens
Colored paper 18" x 12" wide - assorted colors
Staplers
Copies of teacher's schedule
Transparency of school map

PROCEDURE: Tell students:

We now know that Anthropology is the study of man, Ecology is the study of man and nature interacting, and Geography the study of earth. Now let's see if we can put our definitions into practice and learn about these concepts as they fit into our school environment.

First we have to understand what a map is and how it works.

Pass out one school map to each student. Put transparency of same on the overhead. Explain that the following always applies to a map:

1) A direction finder - have students find it. Point out that on a map, north is at the top of the paper unless otherwise indicated. Have students find the classroom they are in at that moment and its relationship to north. Have them point to north in the room.

   Go through each of the directions: South at bottom of map -- East on right side of map -- West on left side of map.

   Go through each direction in the room. (To vividly illustrate and help those who have trouble, have students stand and go through a drill on directions -- while holding map in their hands and turning direction area on top as well as facing called direction).

2) A key or symbols list and what it means.

3) An index of what can be found. On this map, point out that the index is not separate but written on the room square; i.e., the room numbers.

   Pass out the teachers' schedules and explain that these will also serve as our guide to doing our map work.

   Explain how the teachers' schedule should be read:

a) Alphabetical order by teacher's name. Point out if teachers are Mr., Miss, or Mrs.
b) Room assignments or if floating teachers, then where indications of what room they are in each period.
c) Planning periods are empty spaces.
d) How lunch assignments are read.

Explain that a teacher's assignment for the map work should go according to the classes they teach the most of: Put an example on the overhead.

Example:

	1	2	3	4	5	6	7
Mrs. Higgins	Math	Home Ec.	Math	Math 3-L	Home Ec.	Planning	Math

Because of the majority of Mrs. Higgins' day is spent in teaching Math, you would color her room the color you chose for Math areas.

Pass out the map of Chinook assignment sheets and a second outline map. Using a transparency of each go through thoroughly each part of the assignment with students. Point out that Practical Arts involves four subject areas. If a teacher teaches two classes of music and two of Practical Arts, that means they are teaching the Music section of Practical Arts and the room would be colored according to Music.

Teacher Note:

North on our school map faces the right side of the paper. Hence when student has the map on his desk and working on it, the front of the school is at the top and the direction on top of the map is west. Therefore on our map assignment sheet when we ask students to label A and B in the S. W. corner, we are asking it to be in the upper left-hand corner. You may wish to change this according to the outline of your own school map.

MAP OF CHINOOK ASSIGNMENT SHEET

Do you know your school??? How well??? After we finish this assignment, I hope you will be very familiar with your school. Read this paper thoroughly BEFORE you begin. Using the teachers' schedule and your two outline maps, do the following:

1) Label one map "A" and the other "B" in the S.W. corner of each map.

On Map A, do the following:

1. Color in, or if you are using Flair pens, outline the rooms by SUBJECT, or use - a different color for each subject. (Remember that the class most taught in a room determines its color.) Make a key to show what each stands for; i.e., English, Reading ----- blue = English.

   English, Reading
   Math
   Social Studies (American History, Anthropology, Wash. State History)
   Industrial Arts and Art
   Home Economics
   Foreign Language (Spanish, French)
   Science
   Special Education
   P. E.
   Music (Band, Chorus, Ensemble, Orchestra)
   Halls
   Storage and Lavatories
   Office areas, team teaching and miscellaneous
   Cafeteria, kitchens and boiler room

2. Label teachers, counselors, administrators, and librarian in each room or office. (Remember if a teacher is in a room only one period of the day, his/her name doesn't need to be labeled there.)

3. Draw in the borders of the school, all four of them; i.e. roads and names, etc.

4. Draw in any portables or buildings on school grounds not shown on the map and label their use.

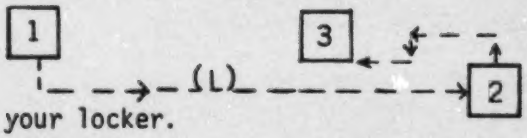
5. Make a directional compass or complete the one already there.

Map B

1. Color in by subject area, matching the colors used on Map A, your classrooms you use throughout the day. Print neatly each teacher's name beside room.

2. Indicate by dotted line, your route through the school from first through sixth period. Omit lunch (just the stop for lunch, not your fourth period class.)

Example:



3. Label your locker.

4. Color in parking areas, grass, courtyards, shrubs, drinking fountains, etc. Look around as you change classes and find out what is there.

Tell students:

Each map should be as neat as you can make it. These are small maps and mistakes will be hard to correct so work carefully. A messy map will also be difficult to read and you will need your information on these maps for your next exercise, so be very careful that you are accurate with your information.

When you have finished both maps and are satisfied that you have all the information you need, mount both maps on a piece of the colored paper provided, Map A on top, and provide a key as to how the map should be read.

> Put your name, date, and period in the upper right-hand corner of the colored paper and turn them in to me.

Allow students three to four days to complete the map work. Four days should be the maximum time needed if the explanation before giving them the papers was thorough. Most map work is individual, but if you wish students to work together, allow no more than two to do so. The larger the group sitting together, the less work is accomplished.

Possible Review Process:

Using the overhead projector, allow students to correct their own maps, as you write the names and subject areas on the transparency.

Playing a game for review is often a fun way for students to remember names, locations and directions.

Use your overhead. In the upper right-hand corner write the words Yes/No. Then tell the class: *I'll write down a room number or person's name. You tell me*

a) *The direction I would go from the office* (or your classroom, or some other point in your building)
b) *If I give you a number, you tell me either a name or subject.*
c) *If I give you a name, you tell me a room number or subject.*

Then, without answering them directly when they answer, mark either yes or no to their answers. They like to see those yes answers pile up!

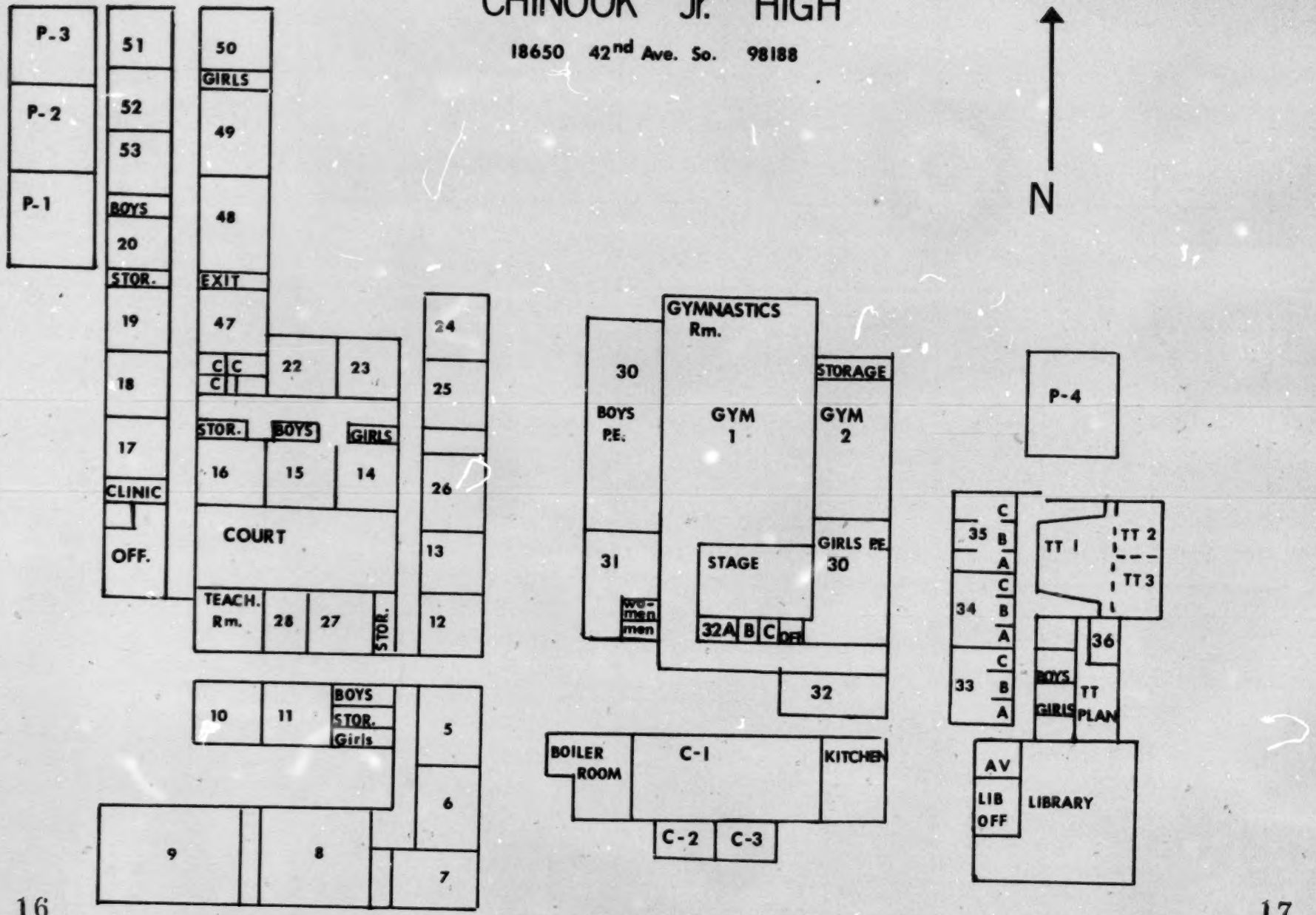
EVALUATIVE ACTIVITY:

Using the format as shown here, you can compose a test which will fit your particular school. This test can be given at the end of the map assignment and again at the end of the ecology walk to see if there is any difference in students' understanding after having had practical experience in following their maps.

If you plan to re-use the test at the end of the ecology walk, do not pass back their corrected papers until that time.

CHINOOK Jr. HIGH

18650 42nd Ave. So. 98188



CHINOOK JUNIOR HIGH

Rm.	TEACHER	I	II	III	IV	V	VI
26	01 Anderson	8x9 Earth Sci.	7 Science	8x9 Science I.P.S.	7 Earth Sci. L-2	7 Science	
Couns. Off.	03 Bailes	9 Couns. Aid	9 Couns. Aid	9 Couns. Aid	9 Coun. Aid	9 Couns. Aid	9 Couns. Aid
52	05 Baird		8 Basic Math	9 Pre Alg.		8 Math Std.	8 Pre Alg.
P-2	010 Baker						
47	015 Berry		8 Am. Hist. Con.	8 Am. Hist. Con.	8 Am. Hist. Con. L-1	7 English	8 Am. Hist. Con.
31	020 Bender	8x9 Band A	7 Band C	7 Expl. Arts			8x9 Band F
08	025 Boe	8 Ind. Arts	8x9 Ind. Arts	8x9 Ind. Arts	9 Ind. Arts L-3	8x9 Ind. Arts	
49	030 Boulet	8x9 Earth Sci.	8x9 Earth Sci.		8x9 Earth Sci. L-1	8x9 Earth Sci	8x9 Earth Sci.
30	035 Cole		9 Girls P.E.	8 Girls P.E.	8 Girls P.E. L-3	7 Girls P.E.	8 Girls P.E.
25	040 Colman	7 Anthro.	7 Science	7 Anthro.	7 Anthro. L-2	7 Science	
53	045 Coumou	7 Anthro.	7x8 French I	8x9 French II	9 French 3x4 L-1		7x8 French I
08	055 Fowler	8 Ind. Arts	8x9 Ind. Arts		9 Ind. Arts L-3	8x9 Ind. Arts	8x9 Ind. Arts

19	065 Gunderson	7 English	7 English	7 English	7 English L-1		7 English
17	070 Heigh		8x9 Algebra	9 Pre. Alg.	8x9 Algebra L-1	9 Geometry	9 Pre-Alg.
P-3	075 Ingle		8 Int. Math	7 Int. Math	7 Int. Math L-1	8x9 Algebra	7 Int. Math
14	080 Jensen	9 Wa. Hist.		9 Basic Math	7 Int. Math L-2	7 Int. Math	7 Std. Math
33	085 Johnson	9 English		9 English	9 English L-2	9 English	9 English
	090 Kramer		9 CAT	9 CAT		9 CAT	
11	095 Lackey	7 English		7 English	7 English L-2	8 English	7 English
16	097 Larsen	8 Am. Hist. Con.	9 Wa. Hist.	8 Am. Hist.	8 Am. Hist. L-2	9 Wa. Hist.	
48	098 Levenhagen	8x9 Science	7 Science	8x9 Science	8x9 Science L-1	8x9 Science	
C-2 30	100 Loree	8 Am. Hist.		8 Health	8 Health L-3	9 Girls P.E. 30	8 Health
20	105 Mattson	9 Boys P.E.	9 Geometry	8 Std. Math		8 Std. Math	9 Basic Math
Off.	McClelland	9 Off. Aid	9 Off. Aid	9 Off. Aid	9 Off. Aid	9 Off. Aid	9 Off. Aid

05	115 McHugh	8x9 Home Ec.		7 Expl. Arts	7 Expl. Arts L-2	8x9 Home Ec.	8x9 Home Ec.
Lib.	117 Miller	9 Lib. Aid	9 Lib. Aid	9 Lib. Aid	9 Lib. Aid	9 Lib. Aid	9 Lib. Aid
P-4	120 Montgomery						
15	125 Muccilli	9 Wa. Hist.	7 Anthro		7 Anthro L-2	9 Wa. Hist.	7 Anthro
30	130 Muscutt		7 Boys P.E.	8 Boys P.E.	8 Boys P.E. L-3	7 Boys P.E.	8 Boys P.E.
24	135 Nourse						
06	140 Pittington	8x9 Home Ec.	8x9 Home Ec.	9 Bach. Home Ec.	9 Home Ec. 3x4 L-3		9 Home Ec.
23 30	145 Purdin	8 Am. Hist. 23	9 Boys P.E. 30	8 Am. Hist. 23	8 Am. Hist. 23	9 Boys P.E. 30	
C-2 30	150 Roberts	9 P.E. Girls 30	7 P.E. Girls 30	8 Health C-2	8 Health C-2 L-3		8 Health C-2
18	155 Robinson	7 Int. Math	8 Std. Math		8x9 Algebra L-1	8 Std. Math	7 Int. Math
51	160 Rossman		8x9 Spanish 2	9 Spanish 3x4	7x8 Spanish 1 L-1	7x8 Spanish 1	8x9 Spanish 2
P-4	163 Royce						

22	165 Skidmore	7 Anthro	9 Wa. Hist.		8 English L-2	7 Anthro.	7 Anthro.
12	170 Smiglewski	7 Reading		7 Reading	8 English L-2	7 Reading	7 Reading
34	175 Smith	9 English	9 English	9 English	9 English L-2		9 English
47 08	180 Steigers	7 Basic Math 47		7 Expl. Arts	7 Exp. Arts L-3	8x9 Ind. Arts	8x9 Ind. Arts
13	190 Trask	7 Reading		7 Reading	7 Exp. Arts L-2	7 Reading	7 Reading
32	200 Voegtlin	7x8x9 Orchestra	8x9 Chorus	8x9 Chorus	8x9 Chorus L-3		7 Chorus
27	205 Wear	8x9 Art	8x9 Art		8x9 Art L-1	8x9 Art	8x9 Art
07	195 Tyllia	8x9 Art	8x9 Art	7 Expl. Arts		8x9 Art	8x9 Art
50	210 Wilson	7 Std. Math	8 Std. Math	8x9 Algebra	8 Std. Math L-1		8 Std. Math
10	215 Wraspir	8 English	8 English	8 English		8 English	8 English
35	220 Zukerman	8 English	8 English	8 English		8 English	8 English

MAP QUIZ

Name _____

Period _____

1. Tell which subjects are taught in the following rooms:

   A. 23 _____ C. 49 _____
   B. 12 _____ D. 33 _____

2. Name two English teachers (not your own!).

   _____ _____

3. Name two Math teachers (not your own).

   _____ _____

4. Name two Science teachers (not your own).

   _____ _____

5. The front of our school faces _____(direction).

6. The football field is on the _____(direction) side of the school.

7. North is shown on a map by _____.

8. If you were in room 33 for class and were to take a student to the nurse:

   a. In which direction would you go? _____

   b. In which major part of the building would you be in? _____

   c. Of the following areas, which would you pass? (Circle your answer(s).)

      1. Library
      2. Mr. Boulet's science class
      3. Cafeteria
      4. A lavatory
      5. The art room
      6. Mr. Mills' office
      7. The shop classes
      8. The Spanish classes

9. Our chief custodian is _____

10. Mrs. Bailes' office is located _____

LESSON 3

CONCEPT: Maps are made to be used. Life adapts to its environment with the aid of innate and learned behaviors.

MATERIALS:
Student maps (from Lesson 2)
Ecology walk handouts
Clip boards or pieces of heavy cardboard (have students supply their own)
Pencils or pens
Name tags 2" x 2" squares, four colors, one for each group
Pins (straight)
Small litter bags (at least two per group) - You may wish to contact a store or agency to supply these bags as advertising. Or appoint a student to explain the project to a store owner and ask him to donate the bags.

PROCEDURE: Explain to students: Preparation: <u>One day</u>

<u>Day One</u>: *Now comes the practical application of our map work and this will show you whether or not you really understand how a map works. Use your maps to orient yourselves as you move through the Ecology walk.*

Either have students choose partners for the exercise or assign partners. Then divide class into four equal groups and have them sit with their partners in their groups -- A, B, C, and D.

Pass out the Ecology walk papers and have students read the general directions aloud. Ask if they have any questions about the directions <u>only</u>, and answer them at this time. Explain any points that aren't clear.

Go over vocabulary list with class, making sure all words are understood.

Then direct students to read through the papers, using their maps to follow the route as stated. Tell them to read and follow the route according to their group assignments; i.e., Group A follow A route and directions, Group B follow B route and directions, etc.

When students have read through papers ask:

Besides following your maps through the school, what else do you notice that you will be doing during this exercise?

What sort of items will you be looking for?

Why would we ask you to observe these items?

How do those observations and questions fit in with what we've been doing in class?

Why have we labeled this exercise "an ecology walk"?

Hopefully someone will relate the walk questions to their bulletin board definitions and previous class discussion on the interrelationship of ecology and geography.

Tell class: *As you take your walk and write down your observations, be thinking of the way you personally fit into the picture of geography and ecology.*

Pass out colored paper for permission slip name tags. Emphasize to students that honor and responsibility are a major factor in the performance of this task. That other classes are in session and it is very important that their behavior doesn't disturb those classes.

Tell them that the permission slip name tags must be visible at all times so that teachers/principals will be aware they are on authorized school business. Remind them that their manners and behavior should indicate this but the permission slip is a necessity for proper school function.

Have the name tags filled out as follows:

Date _____
Group _____
Period _____

STUDENT NAME

ANTHROPOLOGY, ECOLOGY WALK PERMIT

Teacher's Name
Room Number

Pass out litter bags to each group and tell students to leave each area they visit cleaner than they found it. Though they are not to scour each area for litter -- only pick up visible litter and return the bags to the classroom. (It may be best to appoint only four members of each group for this task.)

Ecology Walk Vocabulary

Go over these words with the class as you go through the walk handouts with them.

refuse litter vandalism overhangs crest

Day Two: When name tags are on and students have assembled all materials and understand their route, turn them loose to perform their task by themselves.

Remind them before they leave of the time factor and that they should carefully watch their time -- not to rush but not to dawdle either.

The actual walk should take a full class period. It is better to make name tags and read through the sheets the day before the actual walk takes place so that they may have most of a class period for the walk itself.

Some students will finish sooner than others. Allow all students at least half a class period to finish filling in their papers and discussing final points with their partners before you proceed to lesson four.

We have mentioned on our walk handouts, a reward for good performance. This is optional with the teacher. We purchased a quantity of penny candy and distributed to the classes at the end of the exercise. It is interesting to see what happens to wrappers!

EVALUATIVE ACTIVITY:

Pass out copies of the test taken at the end of lesson two and have students retake the test.

When they have completed the test, use the overhead projector to write out the answers and have them correct their own papers. Pass back first test and compare the two

OR

Collect the papers, correct them and pass both copies back so students can compare the differences.

Ask class: *Why are there differences in your test scores? What helped you get more correct the second time you took the quiz? What does that tell you about using a map?*

ECOLOGY WALK

YOUR NAME _____

Let's take an observation walk around the school to see if our map work was really valuable.

YOUR PARTNER'S NAME _____

YOUR STARTING AREA _____

This is a three-way lesson:

1. Can you FOLLOW DIRECTIONS? _____

2. Do you KNOW YOUR SCHOOL? _____

3. Can you be QUIET AND HONEST? _____
(THE HONOR SYSTEM)

YOUR GROUP ASSIGNMENT _____

I shall not give you any further instructions and will not lead you on this walk. These instructions will be your guide. READ THEM CAREFULLY.

The class will be divided into 4 sections (A, B, C, and D). These correspond to where you will start your walk. This is a 45-60 minute walk. Silence, except when allowed by instructions, is mandatory. You will each have a partner and will be responsible to each other. Those who make the walk successfully without talking will be rewarded when you return. I am trusting all of you to behave so I hope you will not ruin this and disappoint me.

GROUP A WILL START AT THE ROOM
GROUP B WILL START AT PORTABLE 3
GROUP C WILL START AT THE CAFETERIA
GROUP D WILL START AT THE ENTRANCE TO THE TEAM TEACHING ROOM AND LIBRARY BUILDING

GROUP A:

Proceed east as you leave the room, turn right at the cross hall and proceed to the double doors. Answer the following questions as you go:

1. What colors are the lockers in this hall? _____

   In what condition are they? _____

2. How many classrooms can you look into as you walk down this hall? _____
   How many classrooms have their lights on? _____
   In how many of these rooms are the lights necessary? _____

3. Describe the courtyard. (Really look at it. Is it pleasing to the eyes? Do you see things you haven't seen before?) _____
   _____
   _____
   _____

Go out the double doors and proceed west. Answer the following questions:

1. In what condition are these corridors? _____

_____

Is there any refuse or litter? _____ What kinds do you find? _____

How many trash containers can you find? _____

2. Look up now. In what condition are the overhangs? _____

_____

What are they made out of? _____

3. Do you see any signs of vandalism in this area??? _____

Please list the kinds. _____

_____

You are now at the front of the school. If you need to speak to your partner now is the time to do this. PLEASE RECORD IF YOU DID. _____

FRONT OF SCHOOL:

1. List 5 items that make this area pleasant to look at: _____

_____

2. List 3 items that make it unsightly: _____

_____

3. Wh[illegible]patriotic symbol is found here? _____

NOW PROCEED TO B'S INSTRUCTIONS:

GROUP B: YOU WILL BEGIN AT PORTABLE 3 TO COMPLETE THIS PART

Starting from Portable 3 proceed down the path toward the front of the school.

1. Can students from the portables see the students in the classrooms?

_____

2. What evidence can you see that students don't use the pathway? _____

_____

3. List three types of litter you find along the pathway. _____

_____

4. How many doors does each portable have? _____

Proceed to the front entrance of the school. Enter by the office and walk down the hall -- answer these questions as you go:

1. List the sources of student information found in this main hall. _____

_____

_____

2. What types of items are on display in the cases? _____

_____

3. What is hanging in Mr. Kuhnly's office window? _____

_____

4. What is hanging in Mr. Gilman's office window? _____

_____

5. How many trash containers do you see? _____

WALK DOWN THE HALL

6. In what condition are they? _____

7. What is located at the crosshall, on the corner, across from rooms 17 and 18?

_____

KEEP WALKING DOWN THE HALL

8. Where is the storage room located in this hall? _____

_____

9. How many exits are there in this hall? _____

10. Are there any lavatories in this hall? _____ (Take a peek inside of one). Condition? _____

YOU ARE NOW AT THE END OF THE HALL. GO OUT THE DOUBLE DOORS AND PROCEED EAST AROUND THE OUTSIDE OF THE BUILDING

1. What is located directly in front of you? _____
   Describe it. _____

_____

(YOU CAN NOW TALK TO YOUR PARTNER IF YOU NEED TO). Record if you did. _____

WALK AROUND THE CREST OF THE HILL

1. In what condition is this immediate area? (Note the grass, or lack of it, signs of litter, etc.) _____

_____

_____

Is there any sign of erosion or run-off? _____

What could be done to alleviate (stop) that problem? _____

_____

WALK DOWN THE SIDEWALK NOW TO THE ENTRANCE BY ROOM 24: PROCEED DOWN THE SIDEWALK BETWEEN THE GYM AND THE MAIN BUILDING.

1. Look at this area. Is it pleasant to the eyes? If not, why not? _____

_____

2. Is there any sign of the kids not using the sidewalk? _____

_____

GROUP C: YOU ARE AT THE ENTRANCE TO THE CAFETERIA. LOOK IN THE WINDOWS.....

1. In what condition is the cafeteria? _____

(Any signs of litter, vandalism, etc?????)

What does it look like after lunch? _____

_____

2. What entrance is next to the cafeteria? _____
3. Who teaches in C-2 and C-3? _____
4. Name three items you can see in the kitchen. _____

_____

WALK OVER TO THE ENTRANCE TO THE GYM. GO IN THE DOORS AND WALK EAST:

1. What are rooms 32, A, B, and C to be used for? _____

_____

What are they actually being used for? _____

_____

2. LISTEN CAREFULLY.....
Describe the noises you can hear? _____

_____

_____

3. What subjects are being taught in this building? Can you tell merely by the noises? _____

_____

_____

PROCEED BACK TO THE DOORS AND OUT

1. Name three items that make this area attractive: _____

_____

_____

WALK DOWN TOWARD THE LIBRARY BUILDING AND GO ON THE GROUP D:

(YOU CAN TALK TO YOUR PARTNER NOW). Record if you did. _____

GROUP D: YOU ARE STANDING IN FRONT OF THE DOORS THAT LEAD INTO THE LIBRARY BUILDING. LOOK BEHIND YOU:

1. What did you just come down? _____

Can you think of any good reason(s) why this is better than steps? Explain

_____

_____

In what general condition is this area? _____

_____

VERY QUIETLY, ENTER THE BUILDING. LOOK INTO THE LIBRARY (IF YOU ARE VERY QUIET, YOU CAN ENTER THE LIBRARY)

1. Name three items that make the library attractive: _____

_____

2. Do you notice any signs of vandalism or litter? Please explain: _____

_____

_____

3. What is Mrs. Miller's assistant's name? _____

WALK OUT OF THE LIBRARY AND ENTER ONE OF THE LAVATORIES: LOOK AROUND:

1. Describe its general appearance: _____

_____

COME BACK OUT

1. Are there any fire extinguishers in this area? Where? _____

_____

_____

2. What three teachers teach in this area? _____

_____

PROCEED TO THE EXIT AT THE NORTHERN END OF THE HALL. GO OUT THE DOORS:

1. What portable is located here? _____

What is the teacher's name and what does she teach? _____

_____

Describe the program as best you can: _____

_____

WALK WEST AROUND THE GYM UP THE RAMP TO THE DOUBLE DOORS BY ROOM 24:

1. Describe the lower part of the field _____

_____

Is it the same as the part you saw earlier? _____

ENTER AT THE DOUBLE DOORS. NOW PROCEED TO A -- OR ELSE YOU ARE FINISHED.....

TO BE COMPLETED WHEN YOU RETURN TO THE ROOM:

1. Record the following:

   a. The two most littered areas in the school: _____

   _____

   b. The two least littered areas in the school: _____

   _____

2. The places where students may sit in the halls: _____

   _____

   _____

3. Kinds of vandalism and areas where located: _____

   _____

4. Name your two favorite places on campus: _____

   _____

5. Name your two least favorite places on campus: _____

   _____

6. Kinds of litter: Note the condition of each of the main hallways and describe the type of litter found there: _____

   _____

   _____

   _____

   _____

What did you think of this exercise?

_____

_____

_____

How many times did you talk? _____

Did you ever talk when you weren't permitted to? _____

How often? _____

Witness: (your partner) _____
(Sign name here to accuracy of above)

LESSON 4

(Follow-Up and Evaluation of Ecology Walk)

CONCEPT: An ecosystem consists of a community of producers, consumers, and decomposers interacting with the non-living substances around them.

MATERIALS:
Large sheets of butcher paper
Colored pens
Rulers or yardsticks
Student copies of Ecology Walk handouts
Student maps

PROCEDURE: Tell students: *Remember the questions I asked you when you first read through your papers? Let's go back to those questions* (Lesson 3 questions) *and see if we have a correlation between ecology and geography in our walk.*

Continue discussion around what students found.

Then ask students what they think should be done about the information they gathered. How can it best be put to use? Based on their observations, what can they individually do to improve their school? What can they do as a class?

Tell students that before they can really decide what they can do to help their school, they should have some consensus of their findings, and that is what they should do next.

Divide the room into four areas, A, B, C, and D -- and each group sit in one area.

Each group is to elect a chairman, a secretary, (recorder) a researcher, and an artist.

Give each group a set of magazines (same as used for previous exercise), scissors, colored paper, felt pens, tape or glue, rulers and a yardstick, plus the litter collected by that group.

Use the overhead projector or blackboard to show the group what information you wish them to catalogue on the butcher paper; using their findings on the Ecology Walk papers. They are to cover only their <u>starting area</u>, not the whole walk.

Have each group present their findings to the rest of the class and then ask for permission to hang the completed posters somewhere in the building where they can be read by the student body. (i.e., library or cafeteria) Illustrate these with the maps the group made.

SUGGESTED EXTRA ACTIVITIES:

Many good ideas will come from your class itself as to what they wish to do to improve their school. You can expand on their ideas and create more ecological learning experiences for your students, other than what is listed here. Where many sections of 7th graders are doing this exercise, you may wish to have each section concentrate on one of these activities, instead of two or three.

1. After discussion ask class which area they felt was the neatest around the school and why. Who was responsible for that area being so neat? Ask them if they would like to draw up an award for that person and present it in a fitting ceremony.

2. Recyclable paper box. Have on hand in the classroom a large box for students to add to and take from, paper which would ordinarily end up in the wastebasket.

3. Have students form a delegation to present the findings of their ecology walk to the student council and also their recommendations for the improvement of the school grounds; i.e. the addition of waste containers in especially littered areas, more colorful waste containers, a tax on candy sales committees according to the litter left after such sales, etc.

4. Have students write a letter to the school paper publishing their results and listing their recommendations.

5. Organize the class into a litter brigade, write a letter to another class enlisting their co-operation to patrol and clean the most seriously affected areas around school on a rotating basis.

6. Form an Eco-Club of your classroom. Send students out to take pictures of other students littering or working amidst litter and from those pictures make a display for the student body to observe.

7. Have the class brainstorm to see how they can improve their school environment. How they can put themselves into balance with their school ecology.

8. Have a poster contest with the best posters being put on display in prominent areas of the school. Keep posters up for at least a week. You can organize this so that the student body votes on the best poster.

9. Students could recommend a fund raising activity to purchase more litter containers for the school.

10. With permission from your principal and cooperation of the school art teachers, groups in your class may elect to paint and decorate the existing litter containers to make them more visible to littering eyes.

Student Handout or Transparency

On butcher paper:

a) Map of area covered (drawn and labeled).

b) Written (printed neatly) description of the area, its physical make-up.

c) General condition of area, what and where was neatest, messiest, kinds of litter and damage found.

d) What was pleasing about the area.

e) Who uses the area most (students - which grade).

f) Illustrate your butcher paper poster with either words or pictures from the magazines which best apply to your area.

g) Recommendations for the improvement of the area.